



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/957,400	09/21/2001	Takahiko Naito	011157	4490

23850 7590 06/06/2003

ARMSTRONG, WESTERMAN & HATTORI, LLP  
1725 K STREET, NW  
SUITE 1000  
WASHINGTON, DC 20006

EXAMINER

SAN MARTIN, EDGARDO

ART UNIT

PAPER NUMBER

2837

DATE MAILED: 06/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/957,400

Applicant(s)

NAITO, TAKAHIKO

Examiner

Edgardo San Martin

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1 and 4 – 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flugger (US 5,892,186) in view of Heath (US 3,863,445).

With respect to Claims 1 and 6, Flugger teaches an engine muffler (Fig.1, Item 10) comprising a sound absorbing material (Fig.1, Item 20) interposed between an internal tube (Fig.1, Item 17) and an external tube (Fig.1, Item 15), and wherein the ends of the external tube are drawn, but fails to disclose wherein a projection projecting toward the sound absorbing material is formed on the external tube along almost entire periphery thereof.

On the other hand, Heath teaches an engine muffler (Fig.1) comprising a projection (Figs. 4, Item 107) projecting toward the inside of the muffler formed on an external element (Figs.4, Item 103) and that could be along almost entire periphery thereof (Fig.4; Col.2, Line 64 – Col.3, Line 17).

It would have been obvious to a person with ordinary skill in the art to employ the Heath projection in the Flugger muffler design because the projection would provide with a means to firmly secure the position of the muffler with respect to the engine and the vehicle body, and would help to dissipate the heat produced in the muffler.

With respect to Claim 4, Flugger teaches an exhaust air guiding tube (Fig.1, Item 33) provided inside of the internal tube (Fig.1, Item 17).

With respect to Claim 5, Heath teaches a recess (Fig.4, Item 107) formed by forming the projection by pressing a portion of the external tube inwardly; a stay (Fig.4, Item 109) for holding the muffler by suspending the muffler from the bottom portion of the vehicle body; and the stay being provided in the recess along the projection (Fig.4).

2. Claims 2, 3, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flugger (US 5,892,186) in view of Heath (US 3,863,445), and further in view of Morikawa (US 6,223,434).

With respect to Claim 2, Flugger and Heath teach the limitations discussed in a previous rejection, but fail to disclose wherein the sound absorbing material comprises a plurality of kinds of sound absorbing materials having different heat resisting properties and sound absorbing capabilities, and is interposed in a state of being multilayered in the direction of thickness.

On the other hand, Morikawa teaches a muffler comprising a sound absorbing material comprises a plurality of kinds of sound absorbing materials having different heat resisting properties and sound absorbing capabilities, and is interposed in a state

of being multilayered in the direction of thickness (Fig.7, Items 9 and 10; Col.5, Lines 44 – 55).

It would have been obvious to a person with ordinary skill in the art to employ the Morikawa multilayered sound absorbing materials in the Flugger and Heath muffler design, because the multilayered sound absorbing materials would attenuate the sound produced by the engine in a wide frequency range, increasing the efficiency and performance of the muffler.

With respect to Claim 3, Morikawa teaches wherein the sound absorbing material comprises stainless wool (Fig.7, Item 9) disposed on the outer periphery of the internal tube and glass wool (Fig.7, Item 10) layered on the outer periphery thereof (Col.5, Lines 44 – 55).

With respect to Claims 7 and 8, Morikawa teaches a method of manufacturing a muffler comprising sound absorbing material and employing a drawing process. The Examiner considers that the order in which the process is done is a designer choice. Depending on the design constraints, the process could be manipulated to be optimized based on time, economy and/or manpower.

### ***Response to Arguments***

3. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. The Examiner considers that the

Art Unit: 2837

obvious combination to the patents to Flugger and Heath teach the limitations described by the claimed subject matter as discussed above. Furthermore, the Examiner considers that the patent to Heath contain enough suggestion as to motivate any person with ordinary skill in the art to combine Heath's teachings to those of Flubber.


**Contact Information**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edgardo San Martin whose telephone number is (703) 308-1050. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on (703) 308-3370. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Edgardo San Martín  
Patent Examiner  
Art Unit 2837  
Class 181  
June 3, 2003

  
ROBERT E. NAPPI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800